

**TITLE OF THE ABSTRACT:** IS HYSTERECTOMY A RISK FACTOR FOR URINARY INCONTINENCE IN POSTMENOPASUAL WOMEN?

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**KEY WORDS:** urinary incontinence, post menopause, metabolic syndrome, hysterectomy

**OBJECTIVE:**

1. To study the prevalence of urinary incontinence in post menopausal women
2. To study the relationship between hysterectomy and urinary incontinence
3. To study the association of urinary incontinence with metabolic syndrome

**METHODS:**

Our study was a hospital based prospective cohort study done in Christian Medical College and Hospital, a tertiary care center in Vellore district of Tamil Nadu, in southern India. Postmenopausal women, aged more than 45 years, attending the Gynecology outpatient department, Menopause clinic and Female Continence clinic, were enrolled into the study after an informed consent. These women had attained menopause either naturally or surgically.

The demographic details, comorbid illness and details of hysterectomy of the woman were recorded. The woman was then subjected to the UDI-6 questionnaire and the presence of urinary incontinence and its type were noted down. A physical examination was done and her BMI and waist circumference were measured. She was also checked

for any stress leak by performing the supine/standing stress test. The woman's fasting and postprandial blood sugars and her lipid profile were noted down and she was categorized into metabolic syndrome if present.

The details were recorded using epidata software and then analysed using SPSS 16 software. The categorical variables were presented using frequencies and percentages. The comparison of categorical variables were done using Fisher's exact test. The odds ratio and confidence interval were calculated for the prevalence. P value < 0.05 was considered to be statistically significant.

**RESULTS:** We analysed a total of 373 women, with 222 women having a natural menopause and 151 women having a surgical menopause. A total of 180 women experienced urinary incontinence with the prevalence of urinary incontinence among postmenopausal women being 48%. The prevalence of urinary incontinence in the natural menopause (48%) and surgical menopause (49%) groups was similar thus proving that hysterectomy is not a risk factor for developing urinary incontinence (OR 1.0517, 95% CI 0.6954-1.5906).

Stress urinary incontinence was the more prevalent type of urinary incontinence among these women (46%), and it was seen that urge urinary incontinence was seen more often in women with natural menopause than with a surgical menopause (71% vs. 29%, 95% CI 0.272-0.568).

The route of hysterectomy did not affect the incidence of urinary incontinence as the prevalence of urinary incontinence in the women who had abdominal and vaginal

hysterectomy was similar (49% and 47.8% respectively). Preserving the ovaries also did not show a better outcome with regard to developing urinary incontinence.

Obesity and metabolic syndrome had a positive correlation to urinary incontinence with a 60% prevalence of urinary incontinence among obese women and 57% among women diagnosed with metabolic syndrome.

Other known risk factors of urinary incontinence namely, increasing parity, vaginal delivery and diabetes mellitus failed to show a positive correlation to urinary incontinence in our study.